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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/006,166 | 12/04/2001 | Pavel I. Lazarcv | A-71153/AJT | 2857 |

7590

10/29/2004

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| EXAMINER |
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HON, SOW FUN

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| ART UNIT | PAPER NUMBER |
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1772

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

10/006,166

Applicant(s)

LAZAREV, PAVEL I.

Examiner

Sow-Fun Hon

Art Unit

1772

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 15 October 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 5 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See attachment to advisory action.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: None.

Claim(s) objected to: None.

Claim(s) rejected: 1-51.

Claim(s) withdrawn from consideration: None.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☒ Other: Attachment to advisory action.

Advisory Action

1. The proposed amendment will not be entered because the new limitations of "a front panel of functional layers facing an observer" coupled with "at the exit of the front panel" raises new issues that would require further consideration and/or search.
2. Applicant argues that Miroshin teaches that the birefringent anisotropically absorbing layer has the characteristic which provides the interference extremum, but not the liquid crystal material, since liquid crystal is not anisotropically absorbing.

Applicant is respectfully apprised that the anisotropic layer of Miroshin (column 8, lines 35-60) comprises an oriented (column 11, lines 40-60) film of organic dye where {Chromogene}(SO₃)_n is the dye K of Applicant which contains the SO₃⁻ ionogenic groups which provide its solubility in polar solvents in order to form a stable lyotropic liquid-crystal phase, (M)_n is the anti-ion M of Applicant and n is the number of anti-ions in the dye molecule (column 9, lines 45-60). Therefore the anisotropically absorbent layer of Miroshin is a liquid crystal layer.

Furthermore, Applicant is respectfully apprised that Applicant has not defined the liquid crystal layer(s) with respect to its functional and structural relationship as related to the other functional layers of the liquid crystal display, hence the validity of the broad interpretation of the claim.

3. Applicant argues that coordinating the numbers and parameters of all layers in the display to provide the interference extremum at the exit of the display is non-obvious to one of ordinary skill in the art, the reason being that in the prior art, only separate layers are considered in improving performance of liquid crystal displays.

Applicant is respectfully apprised that Miroshin's teaching that the number and parameters of the anisotropic layers in the display are coordinated (number and layer thicknesses selected) so as to provide the interference minimum of transmission for one linearly polarized light component and the interference maximum of transmission for the other orthogonal linearly polarized light component at at least one wavelength transmitted at the exit (output) of the polarizer (column 7, lines 45-55) and hence the display, does provide motivation for one of ordinary skill in the art at the time the invention was made, to have coordinated the numbers and parameters of all layers in the display in order to provide the interference maximum and minimum of transmission at the exit of the display in order to obtain an optimized functional display.

4. Applicant argues that the performance of the liquid crystal display is optimized based on the open and closed states of the liquid crystal material, as well as on the optical thickness and sequence of functional layers, wherein the liquid crystal material is a dynamic element of a liquid crystal display and changes its optical characteristics under electrical field application.

Applicant is respectfully apprised that the liquid crystal layer as presently claimed, does not have an electrical field applied. Furthermore, the anisotropic layer of Miroshin is a liquid crystal layer (column 9, lines 45-60), which inherently would change its optical characteristics in response to an electrical field.

5. Applicant argues that Miroshin fails to teach or suggest an anisotropic electrode, only a transparent conductive layer, formed in an evaporator by successive deposition of corresponding materials. Applicant appears to consider conductivity as an isotropic property.

Art Unit: 1772

Applicant is respectfully requested to provide data demonstrating that an electrode is required to be isotropic in order to be conductive. Furthermore, Applicant is respectfully apprised that Applicant has raised a potential issue of a lack of enablement since an electrode needs to be conductive. Applicant is hence respectfully requested to further clarify the term "anisotropic electrode".

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Hon

Sow-Fun Hon

10/25/04

[Signature]
HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

10/25/04